

# Section 2 anatomy

Cranial cavity folds and  
sinuses

By ASM

# Foramen in the middle cranial fossa

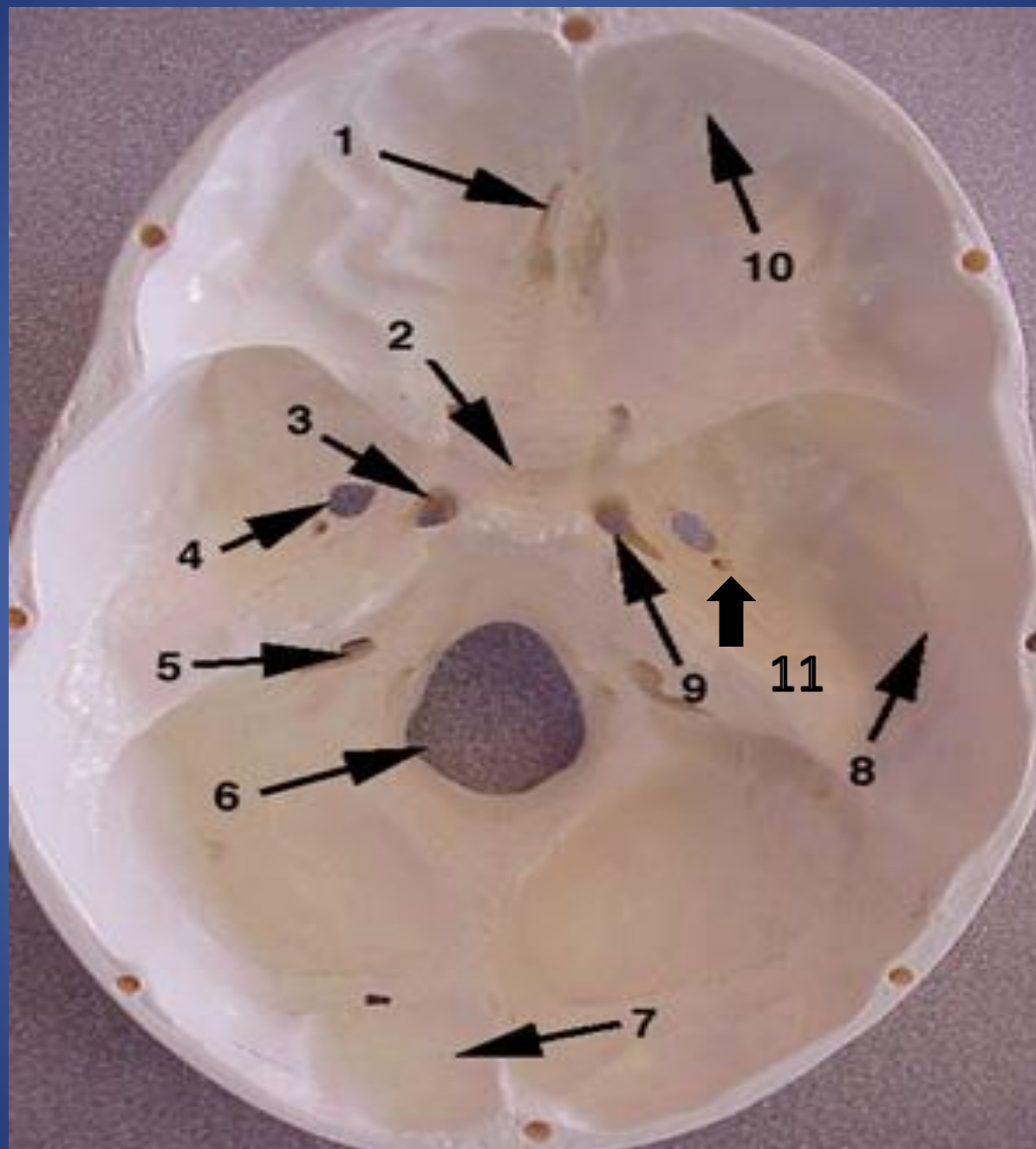
- There are 4 foramen:
  - 1-At the apex of the petrus bone → lacrum foramen
  - 2-At the lateral sides of silla tercica, there are 3 foramen arranged from anterior to posterior making the word “ROS”.

# “ROS”

A-anterior :foramen rotundum

B-middle :foramen oval

C-posterior :foramen spinosum



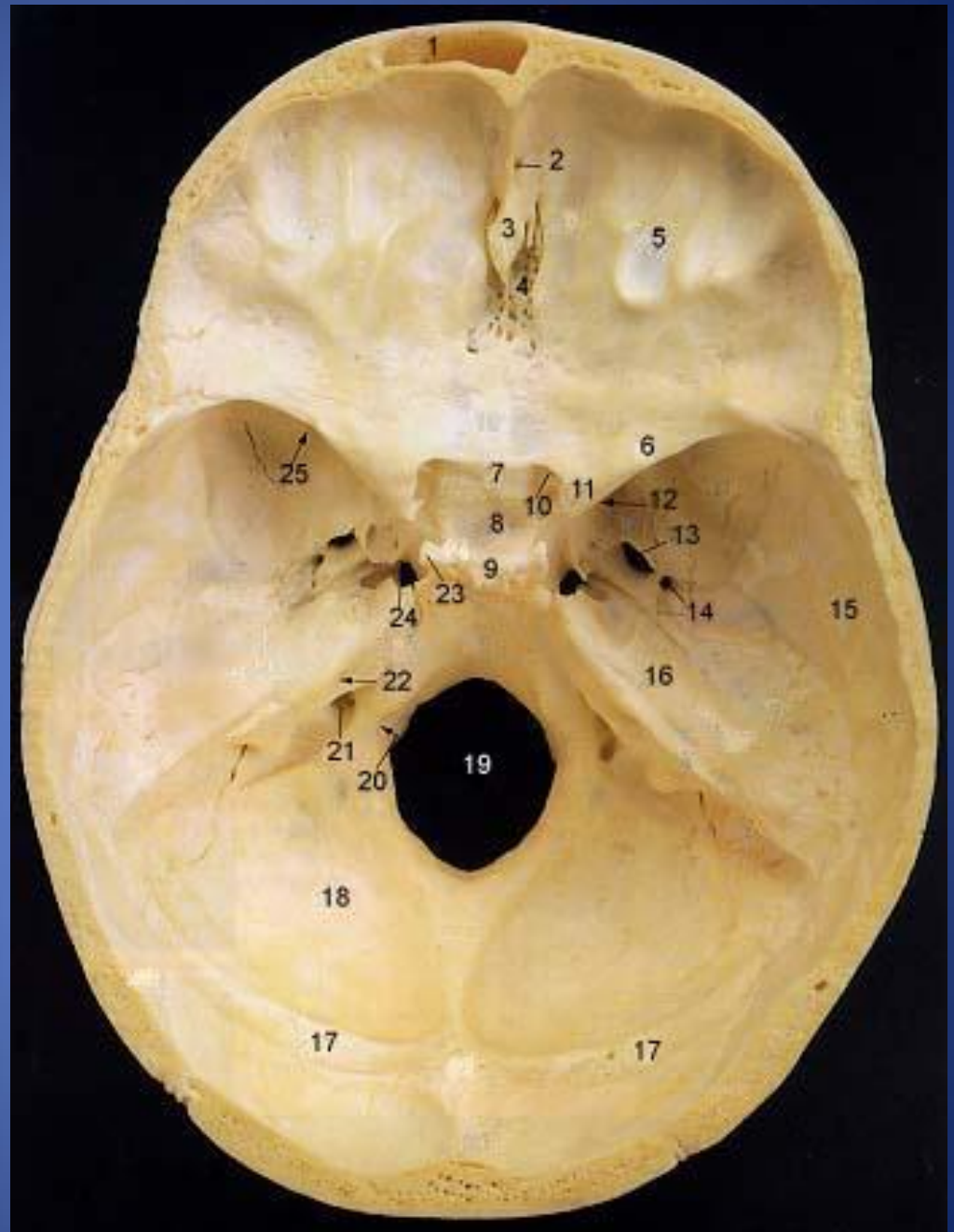
1. Cresta galli
2. Sella tursica
3. Foramen lacrum
- 4. *Foramen oval***
5. Jugular foramen
6. Foramen magnum
7. Occipital bone
8. Parietal bone
- 9. *Foramen lacrum***
10. Frontal bone
- 11. *Foramen spinosum***

12. Foramen  
rotundum

13. Foramen oval

14. Foramen  
spinorum

24. Foramen  
lacrimum



# Foramen of the posterior cranial fossa

1. At the posterior surface of petrous bone there is the *jugular foramen* at the end of the petro-occipital fissure.

2. Foramen magnum:

Surrounded by 4 parts of occipital bone:

- squamous

- 2 condyles

- basilar

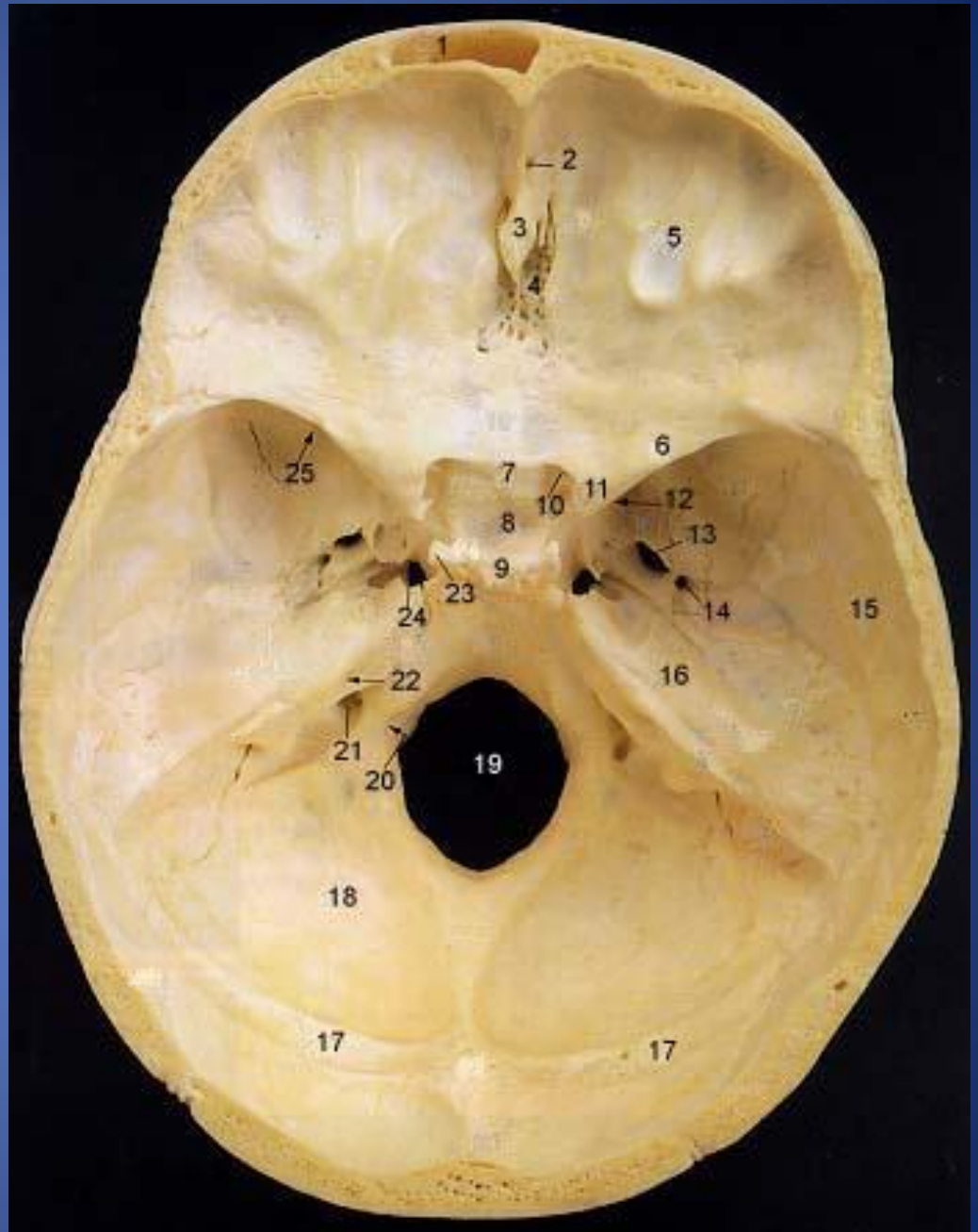
# Foramen of the posterior cranial fossa cont.

3. Condylar bones has foramen called ***anterior condylar foramen*** through which hypoglossal nerve (cranial nerve 12) passes.
4. Posterior condylar canal may be present and may be not.



19.foramen  
magnum

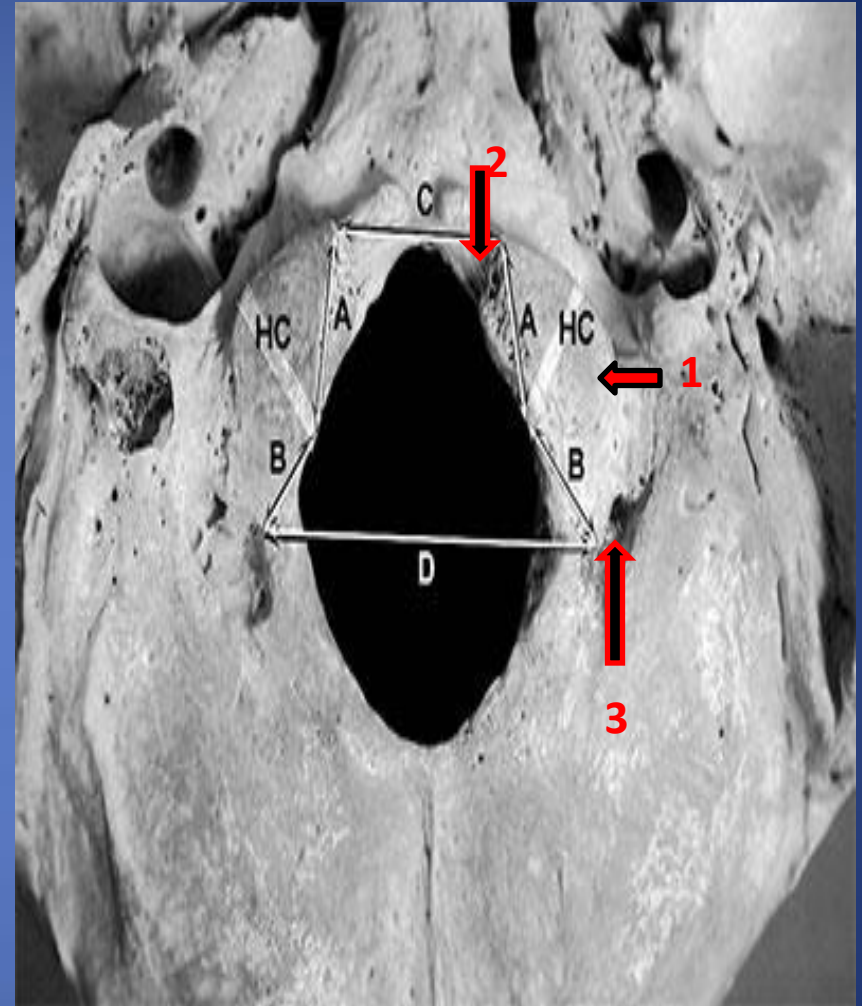
21.jugular  
foramen



1-condylar  
process

2-anterior  
condylar canal

3-posterior  
condylar canal



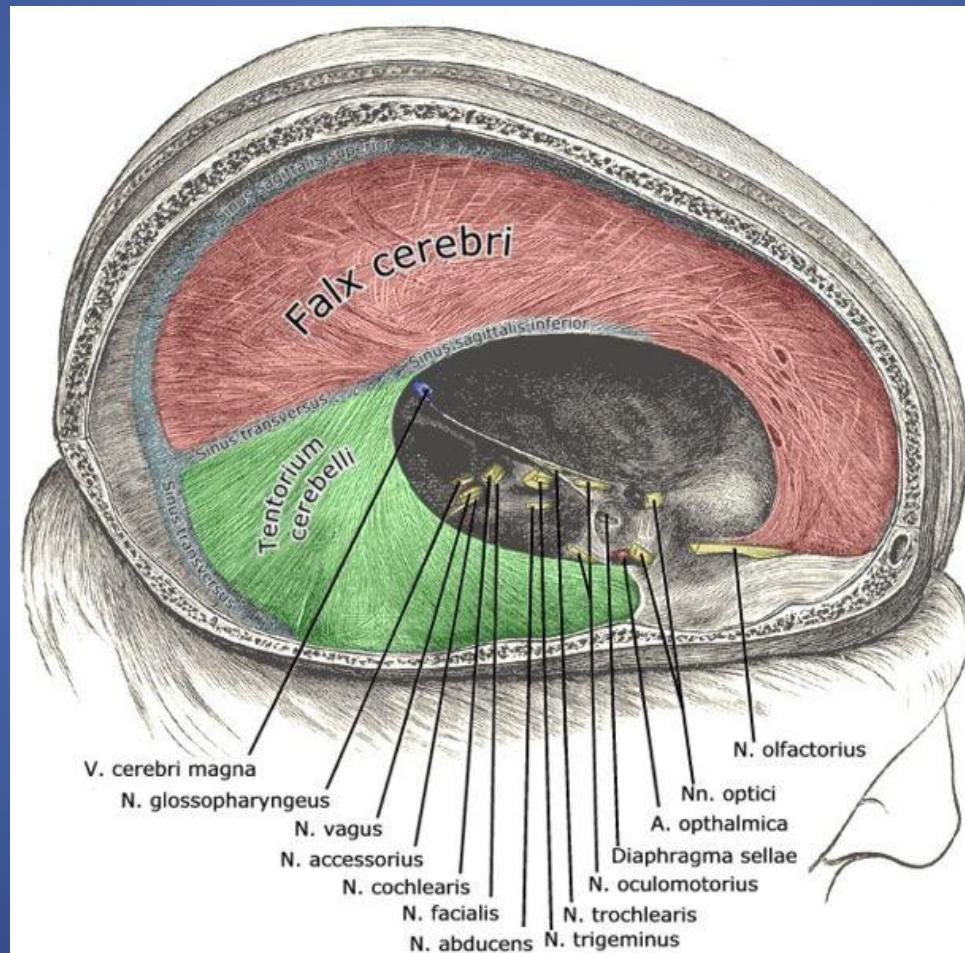
# Folds and sinuses

- The Dura matter is hardly attached to the endicranium (periostum of the skull from inside),they are only separated in forming folds and sinuses.

# Folds

- There are 5 folds:
  1. Between the 2 cerebral hemispheres → ***Falx cerebri***
  2. Between 2 cerebral hemisphere and cerebellum → ***Tentorium cerebelli***
  3. Between the 2 cerebellar hemisphere → ***Falx cerebelli***
  4. Above sella tertia (of the pituitary gland) → ***diaphragma sellae***
  5. Cover the trigeminal ganglia → ***cavum trigeminale***

# Falx cerebri



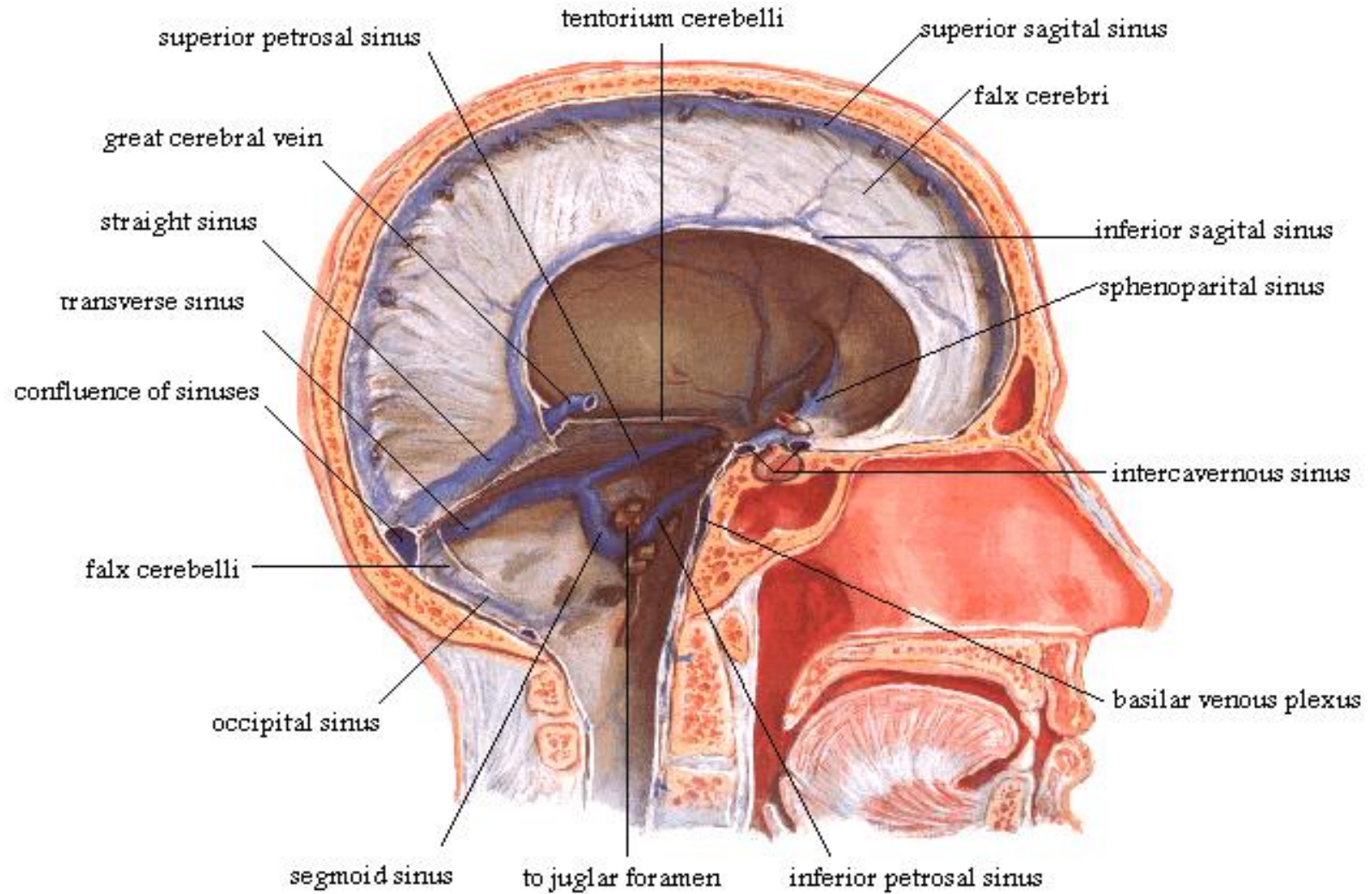
# Falx cerebri

- Sickle shaped (شبه المنجل يعنى مقوسه)
- Has anterior narrow end  
posterior broad end

## Attachment:

- Anteriorly >> Cresta galli  
foramen sacrum
- posteriorly >> internal occipital protuberance  
upper surface of Tentorium  
cerebelli
- superiorly >> superior sagital sinus





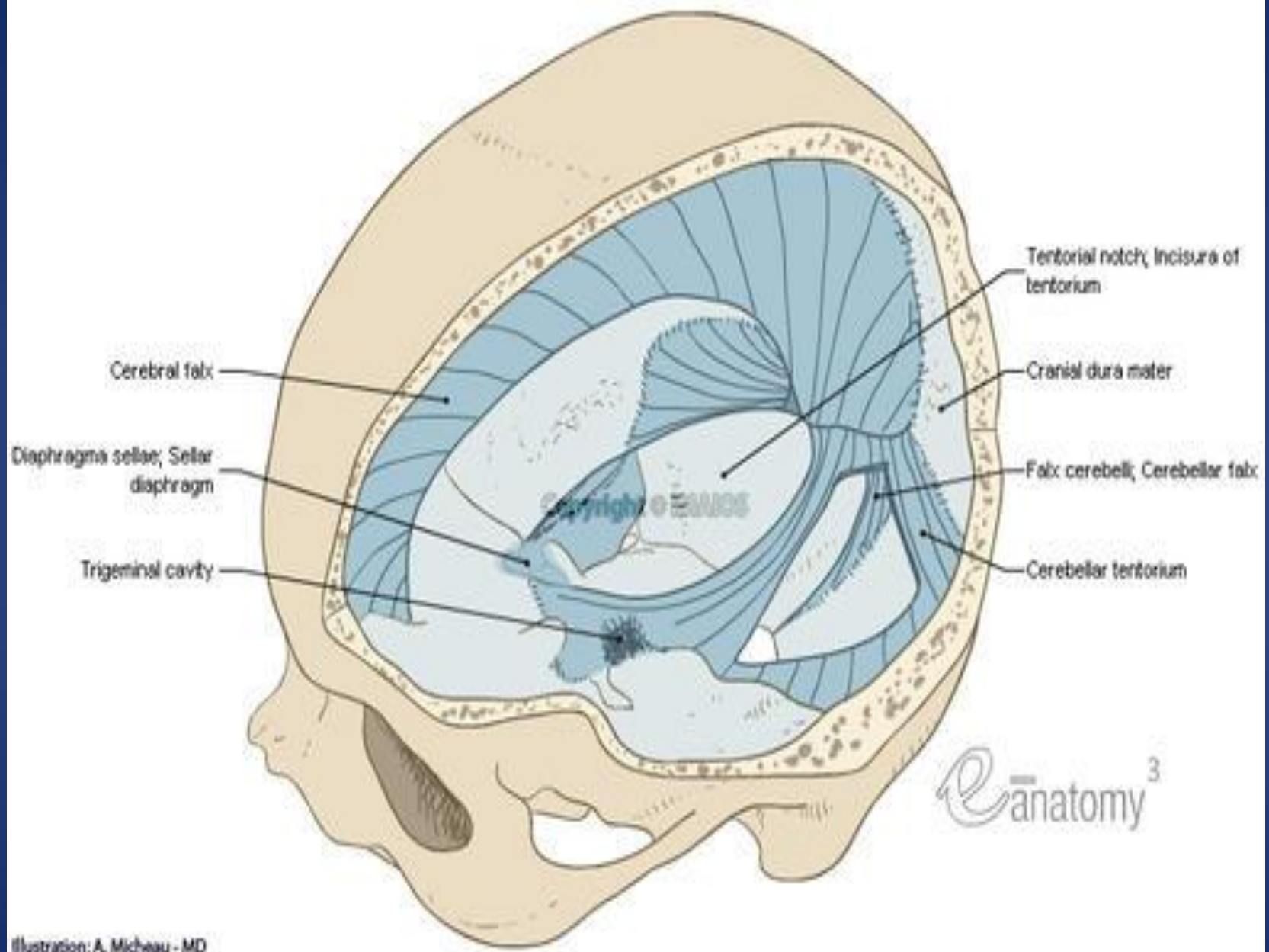
# Falx cerebelli

- Small
- Separate between the 2 cerebellar hemisphere
- Attached to :

Internal occipital protubance

Internal occipital crest





*E*anatomy<sup>3</sup>

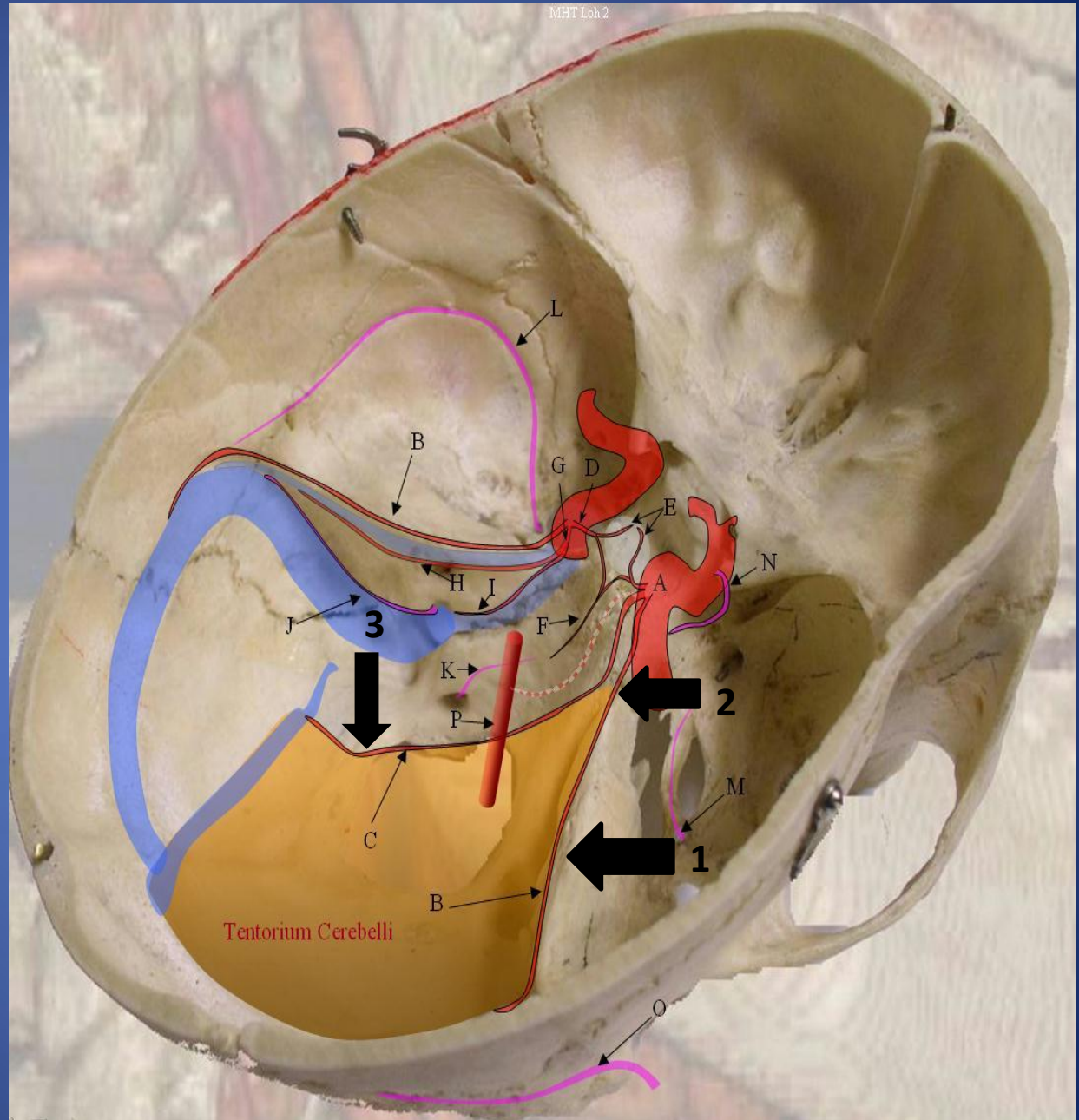
# Tentorium cerebelli

- Separate between cerebrum and cerebellum
- Tent like
- Has free end (U shaped) and attached end (attached to :posterior clinoid process, upper border of the petrous bone and to the margin of the groove of transverse sinus).

1.Upper  
boarder of  
petrous bone

2.poterior  
clenoid  
process

3.groove for  
transverse  
sinus



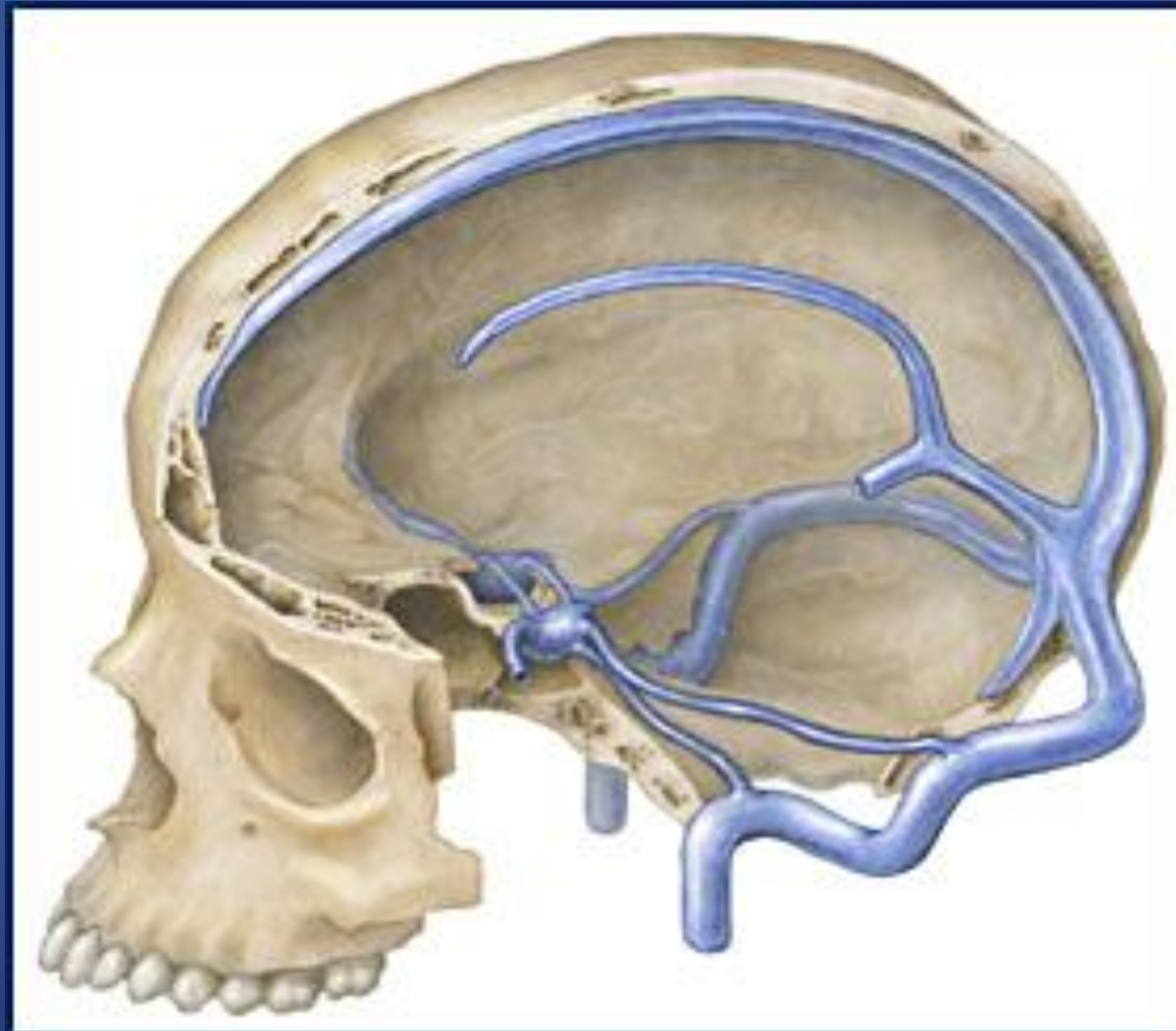
## Diaphragma celli

- Covering the pituitary gland in the hypophyseal fossa.

## Cavum trigeminal

- Cover the trigeminal ganglia

# Venous sinuses





## Related to falx cerebri

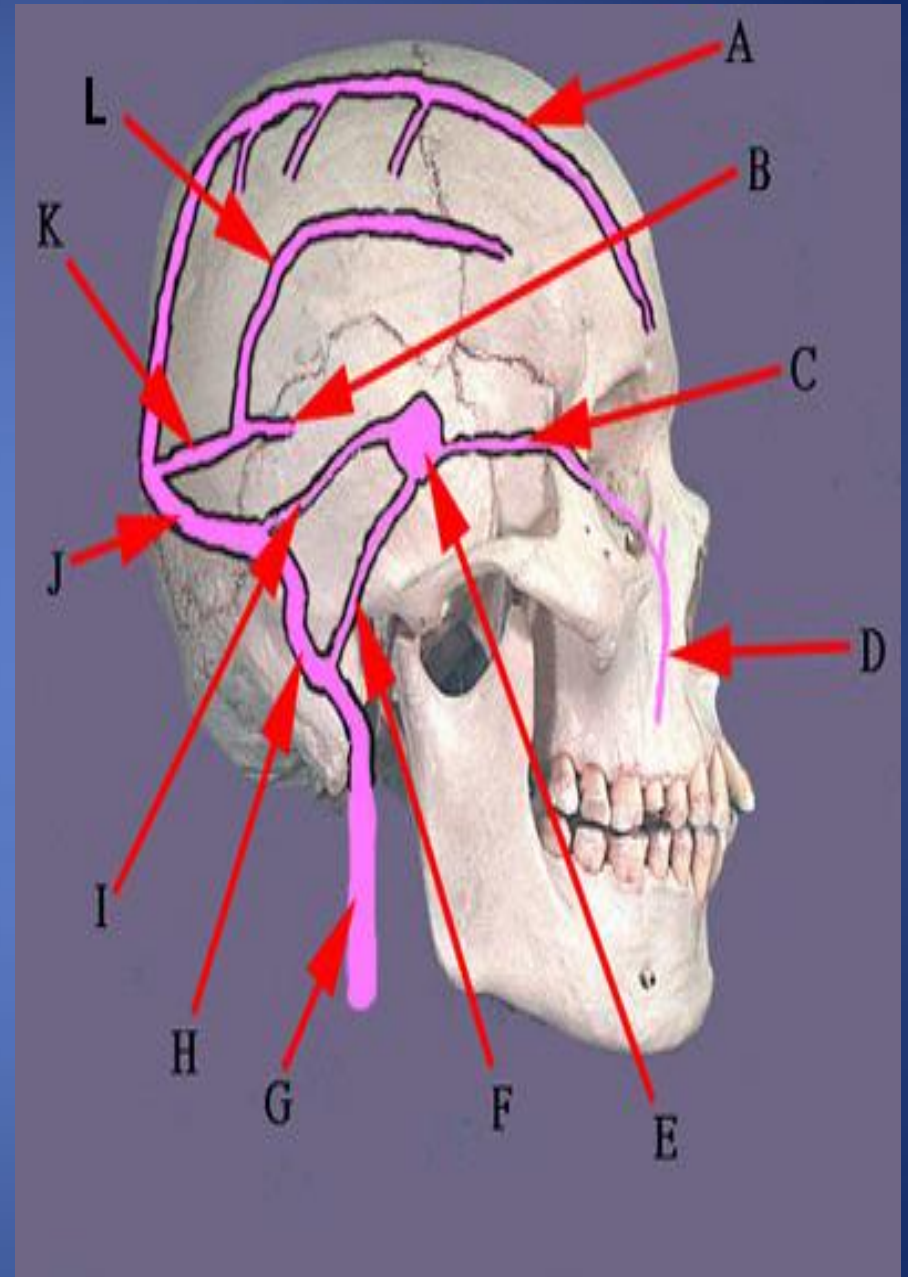
- Upper border → *superior sagittal sinus*.
- lower border → *inferior sagittal sinus*.
- *Inferior sagittal sinus* will combine with the *great cerebral vein* to give the *straight sinus* (at the site of attachment of falx cerebri and Tentorium cerebelli).

A. Superior Sagittal Sinus

B. Great Cerebral Vein

J. Straight Sinus

L. Inferior Sagittal Sinus



- Superior Sagittal sinus give the right transverse sinus.
- While the straight sinus give the left transverse sinus

OR

- Superior Sagittal sinus give the left transverse sinus.
- While the straight sinus give the right transverse sinus

OR

Superior and transverse sinuses combine giving 1 sinus which then divide right and left



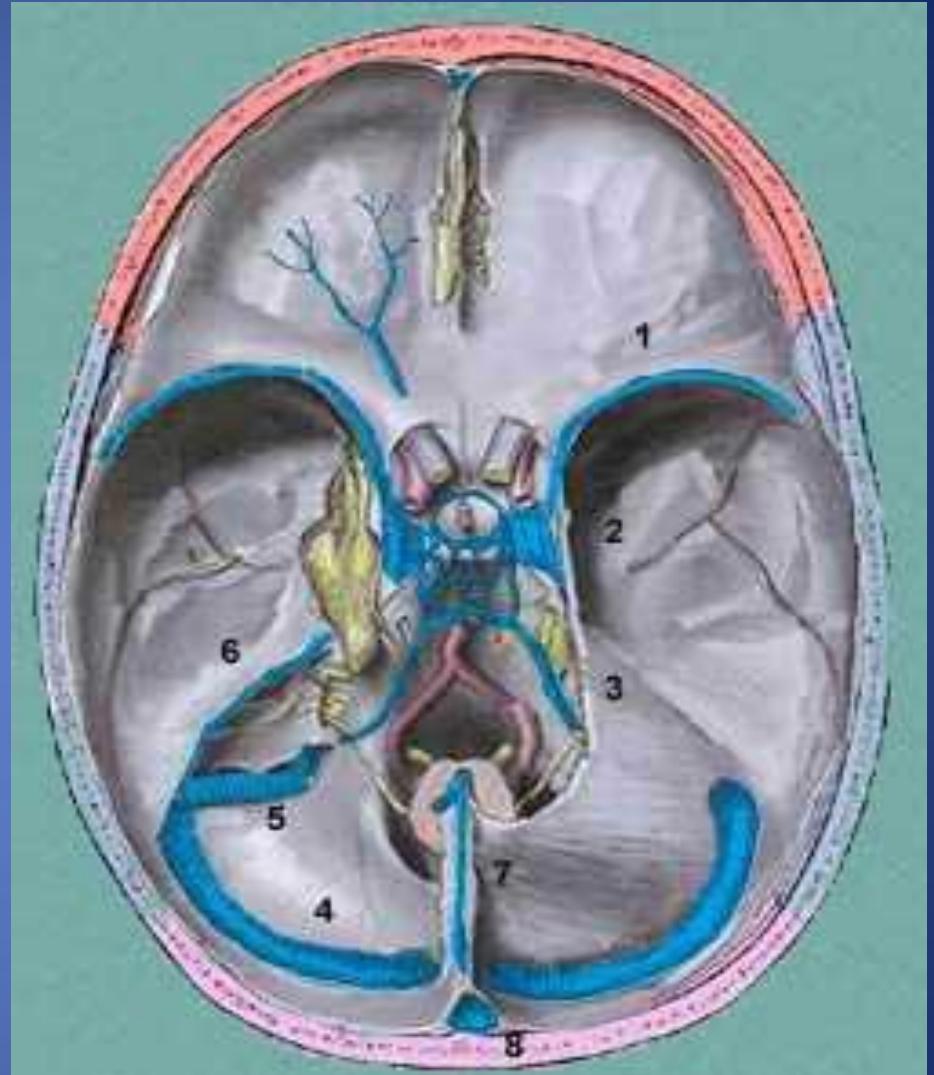
# Sigmoid sinus

- Transverse sinus → Sigmoid sinus → sigmoid groove of mastoid process → jugular foramen → internal jugular vein

4. Transverse sinus

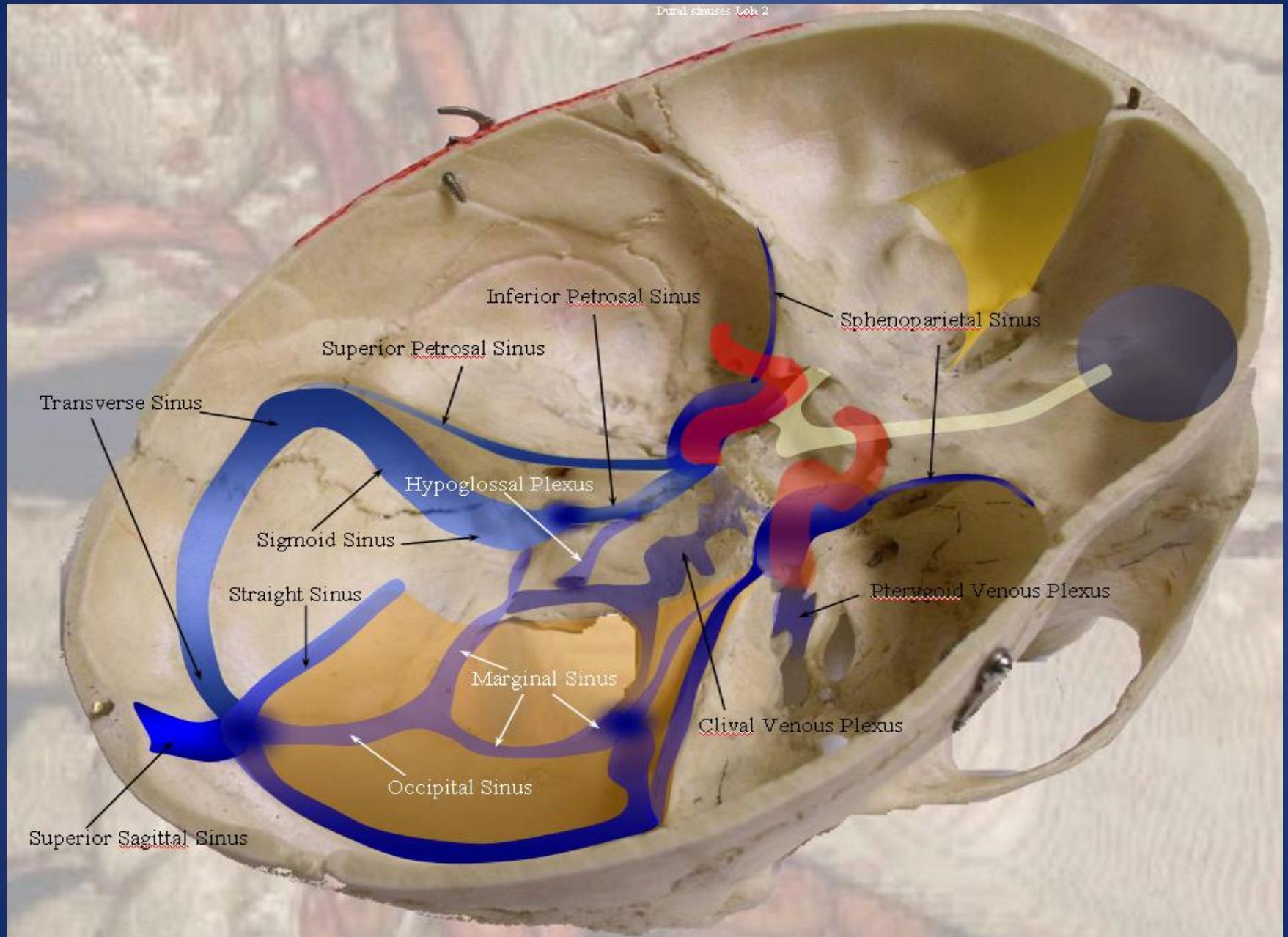
5. Sigmoid sinus

8. superior sagittal sinus



# Occipital sinus

- Coming from internal occipital protuberance  
→ occipital sinus → drain in the transverse sinus .



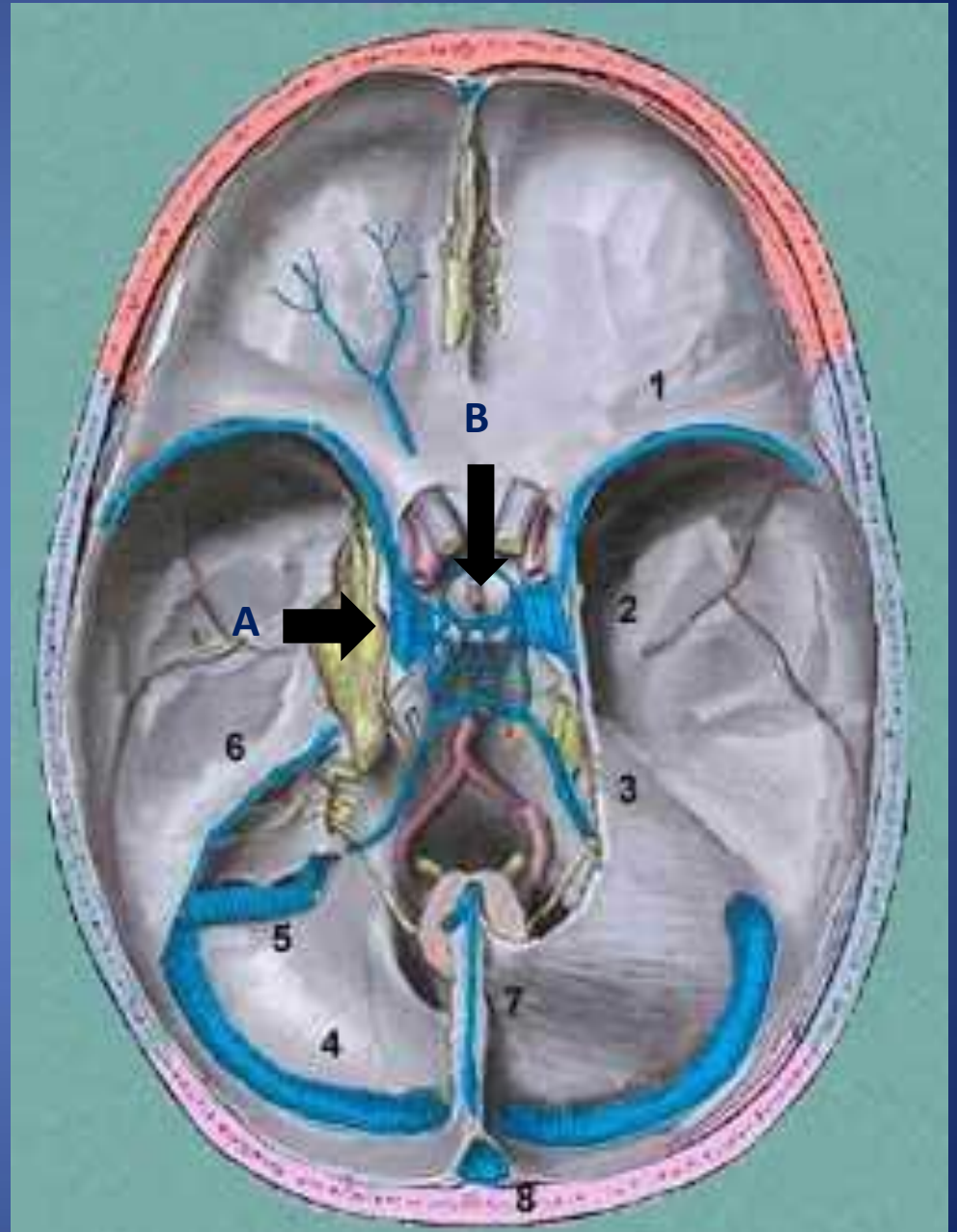
# Cavernous sinus (V.imp)

- Found on each side of the hypophyseal fossa from anterior to posterior longitudinally.
- Between the 2 cavernous sinus, there is the ***Intercavernous sinus*** which take from:
  - eye (sup. and inf. ophthalmic vein)
  - cerebral cortex
  - vault of the skull



A. Cavernous sinus

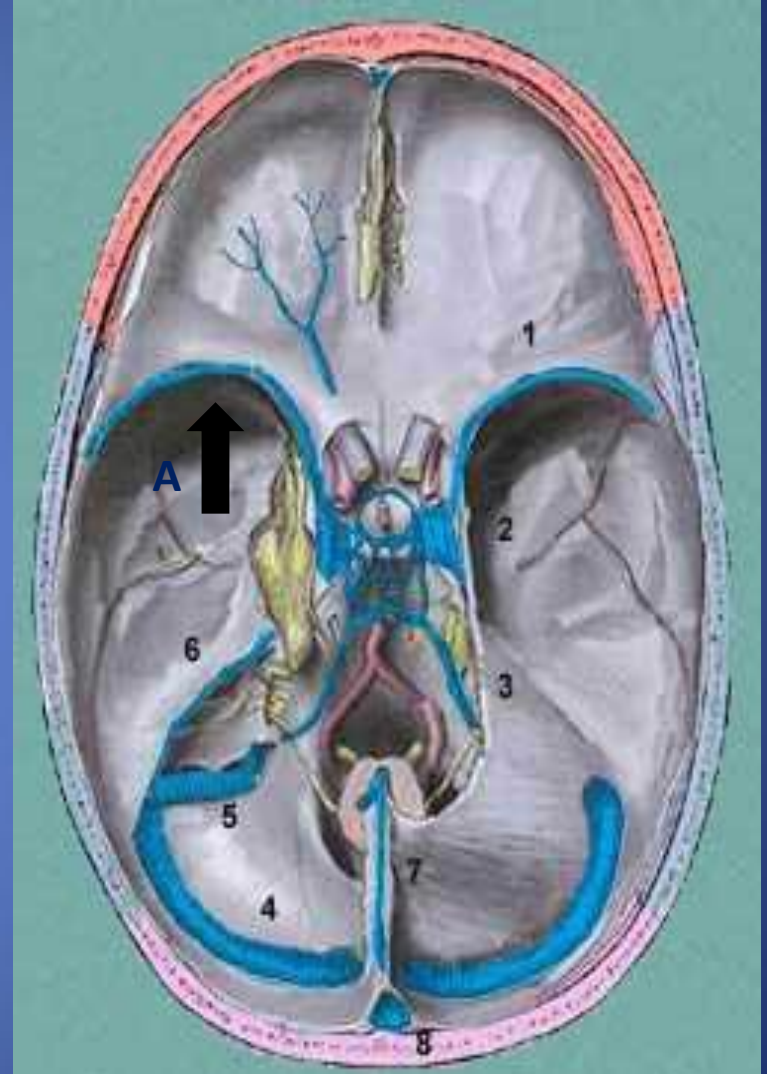
B. Intercavernous  
sinus



## Cavernous sinus(cont.)

- *Spheno-parietal sinus* found at the lesser wing of sphenoid process drain in the *cavernous sinus*

# A. Sphenoparietal sinus





## Cavernous sinus(cont.)

- It drain in the *sup. and inf. Petrosal* sinuses
- The *sup. Petrosal* found on the petrus bone
- The *inf. Petrosal* found on the petro-occipital fissure (has jugular foramen at its end) and drain in the *internal jugular vein*

- Petrus bone is like a triangle surrounded by 3 structures:

1-superior Petrosal sinus

2-inferior Petrosal sinus

3-sigmoid sinus

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